

S/N 10/054,665



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: John F. Engelhardt et al.

Examiner: David Guzo

Serial No.: 10/054,665

Group Art Unit: 1636

Filed: January 22, 2002

Docket: 875.007US2

Title: ADENO-ASSOCIATED VIRUS VECTORS

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Supplemental Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(c)(2), Applicants have included the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p). Please charge any additional fees or credit any overpayment to Deposit Account No. 19-0743.

Four of the attached documents were discovered as a result of an International Search Report in Applicant's related foreign patent application. These patents are: WO 01/083692, US 2002/0131956, US 6,156,303 and US 6,287,569. Enclosed for the Examiner's information is a copy of these cited documents and the International Search Report.

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Page 2

Dkt: 875.007US2

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

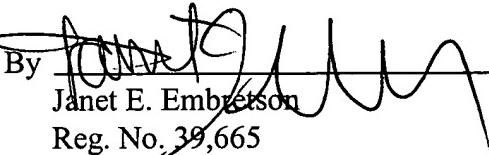
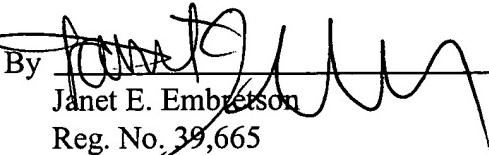
Respectfully submitted,

JOHN F. ENGELHARDT ET AL.

By their Representatives,

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Date

September 16, 2004 
By 
Janet E. Embretson
Reg. No. 39,665

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CANDIS BUENDING

Name


Signature

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COMMUNICATION CONCERNING RELATED APPLICATIONS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Applicants would like to bring to the Examiner's attention the following related applications in the above-identified patent application:

<u>Serial/Patent No.</u>	<u>Filing Date</u>	<u>Attorney Docket</u>	<u>Title</u>
6436392	March 25, 1999	875.007US1	ADENO-ASSOCIATED VIRUS VECTORS
09/684554	October 6, 2000	875.024US1	ADENO-ASSOCIATED VIRUS VECTORS AND USES THEREOF
09/689136	October 12, 2000	875.032US1	COMPOUNDS AND METHODS TO ENHANCE rAAV TRANSDUCTION

Respectfully submitted,

JOHN F. ENGELHARDT ET AL.

By Applicants' Representatives,
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Date September 16, 2004 By Janet E. Embreson

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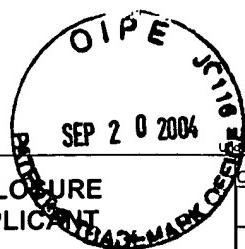
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CANDIS BUENDING

Name

Signature

Candis Buending



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)

Complete if Known

	Application Number	10/054,665
	Filing Date	January 22, 2002
	First Named Inventor	Engelhardt, John
	Group Art Unit	1636
	Examiner Name	Guzo, David
		Attorney Docket No: 875.007US2

Sheet 1 of 3

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
	US-2002/0131956 A1	09/19/2002	Walsh, C. E., et al.	424	93.2	03/12/2002
	US-2003/0103939 A1	06/05/2003	Engelhardt, J. E., et al.	424	93.2	07/12/2002
	US-5,604,090	02/18/1997	Alexander, Ian E., et al.	435	5	06/06/1994
	US-5,834,182	11/10/1998	Alexander, Ian E., et al.	435	5	02/25/1997
	US-6,156,303	12/05/2000	Russell, D. W., et al.	424	93.2	06/11/1997
	US-6,287,569	09/11/2001	Kipps, T. J., et al.	424	199.1	04/06/1998
	US-6,436,392	08/20/2002	Engelhardt, John F., et al.	424	93.2	03/25/1999
	US-6,544,786	04/08/2003	Xiao, Xiao , et al.	435	325	10/13/2000

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
	WO-95/15384A1	06/08/1995	Johnson, D. C., et al.	C12 N	15/38	
	WO-98/24479A1	06/11/1998	Snyder, R., et al.	A61K	48/00	
	WO-00/75365A2	12/14/2000	Engelhardt, J. F., et al.	C12 Q	1/00	
	WO-01/25465A1	04/12/2001	Engelhardt, J. F., et al.	C12 N	15/864	
	WO-01/83692A2	11/08/2001	Hildinger, M. , et al.	C12 N		
	WO-03/006616A2	01/23/2003	Engelhardt, J. F., et al.	C12 N		

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		"PCT International Search Report from International Application No. PCT/US02/21926", (10/15/2002),4 pages	
		BARTLETT, J S., et al., "Targeted adeno-associated virus vector transduction of nonpermissive cells mediated by a bispecific F(ab'gamma)2 antibody", <u>Nature Biotechnology</u> , 17, (1999),pp. 181-186	

EXAMINER

DATE CONSIDERED

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		<i>Complete if Known</i>	
		Application Number	10/054,665
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		First Named Inventor	Engelhardt, John
		Group Art Unit	1636
		Examiner Name	Guzo, David
Sheet 2 of 3		Attorney Docket No: 875.007US2	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		CHU, Q , et al., "Binding and uptake of Cationic Lipid: pDNA Complexes by Polarized Airway Epithelial Cells", <u>Human Gene Therapy</u> , 10, (1999),pp. 25-36	
		COONROD, A , et al., "On the mechanism of DNA transfection: efficient gene transfer without viruses", <u>Gene Therapy</u> , 4, (1997),pp. 1313-1321	
		DUAN, DONGSHENG , et al., "Dynamin is required for recombinant adeno-associated virus type 2 infection", <u>J of Virology</u> , Vol. 73, No. 12, XP002154342, (Decmeber 1999),10371-10376	
		DUAN, D , et al., "Response to "Polarity Influences the Efficiency of Recombinant Adenoassociated Virus Infection in Differentiated Airway Epithelia'", <u>Human Gene Therapy</u> , 10, (1999),pp. 1553-1557	
		FASBENDER, AL , et al., "Complexes of adenovirus with polycationic polymers and cationic lipids increase the efficiency of gene transfer in vitro and in vivo", <u>The Journal of Biological Chemistry</u> , 272 (10), (March 7, 1997),6479-6489	
		FERRARI, F K., et al., "Second-Strand Synthesis Is a Rate-Limiting Step for Efficient Transduction by Recombinant Adeno-Associated Virus Vectors", <u>Journal of Virology</u> , 70 (5), (1996),pp. 3227-3234	
		FISHER, K J., et al., "Transduction with Recombinant Adeno-Associated Virus for Gene Therapy Is Limited by Leading-Strand Synthesis", <u>Journal of Virology</u> , 70 (1), (1996),pp. 520-532	
		GABIZON, ALBERTO , "Long-circulating liposomes for drug delivery in cancer therapy: a review of biodistribution studies in tumor-bearing animals", <u>Advanced Drug Delivery Reviews</u> , (1997),337-344	
		GOTTLIEB, T A., et al., "Actin Microfilaments Play a Critical Role in Endocytosis at the Apical but not the Basolateral Surface of Polarized Epithelial Cells", <u>The Journal of Cell Biology</u> , 120 (3), (1993),pp. 695-710	
		KAPLAN, JOHANNE M., et al., "Potentiation of gene transfer to the mouse lung by complexes of adenovirus vector and polycations improves therapeutic potential", <u>Human Gene Therapy</u> , Vol. 9, No. 10, XP000972242, (July 1, 1998),1469-1479	
		LEBKOWSKI, J. , "Adeno-Associated Virus: a Vector System for Efficient Introduction and Integration of DNA into a Variety of Mammalian Cell Types", <u>Molecular and Cellular Biology</u> , Vol. 8, No. 10,(October 1988),3988-3996	
		LIANG, E. , et al., "Oligonucleotide delivery: a cellular prospective", <u>Pharmazie</u> , Vol. 54,No. 8, XP000965598, (Aug. 1999),559-566	
		MAH, C , et al., "Adeno-Associated Virus Type 2-Mediated Gene Transfer: Role of Epidermal Growth Factor Receptor Protein Tyrosine Kinase in Transgene Expression", <u>Journal of Virology</u> , 72 (12), (1998),pp. 9835-9843	
		PICKLES, R J., et al., "Limited Entry of Adenovirus Vectors into Well-Differentiated Airway Epithelium Is Responsible for Inefficient Gene Transfer", <u>Journal of Virology</u> , 72 (7), (1998),pp. 6014-6023	

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		RUSSELL, D W., et al., "DNA synthesis and topoisomerase inhibitors increase transduction by adeno-associated virus vectors", <u>PNAS</u> , 92, (1995),pp. 5719-5723	
		SANLIOGLU, S , et al., "Cellular redox state alters recombinant adeno-associated virus transduction through tyrosine phosphatase pathways", <u>Gene Therapy</u> , 6, (1999),pp. 1427-1437	
		TERAMOTO, S. , et al., "Factors influencing adeno-associated virus-mediated gene transfer to human cystic fibrosis airway epithelial cells: comparison with adenovirus vectors", <u>J. of Virology</u> , Vol. 72, No. 11, XP002154339, (Nov. 1998),8904-8912	
		VIHINEN-RANTA, M , et al., "Intracellular Route of Canine Parvovirus Entry", <u>Journal of Virology</u> , 72 (1), (1998),pp. 802-806	
		WALTERS, R W., et al., "Basolateral Localization of Fiber Receptors Limits Adenovirus Infection from the Apical Surface of Airway Epithelia", <u>The Journal of Biological Chemistry</u> , 274 (15), (1999),pp. 10219-10226	
		WICKHAM, T J., et al., "Adenovirus targeted to heparan-containing receptors increases its gene delivery efficiency to multiple cell types", <u>Nature Biotechnology</u> , 14, (1996),pp. 1570-1573	
		WICKHAM, T J., et al., "Targeted Adenovirus Gene Transfer to Endothelial and Smooth Muscle Cells by Using Bispecific Antibodies", <u>Journal of Virology</u> , 70 (10), (1996),pp. 6831-6838	
		XIAO, W , et al., "Adeno-Associated Virus as a Vector for Liver-Directed Gene Threapy", <u>Journal of Virology</u> , 72 (12), (1998),pp. 10222-10226	
		YANG, JUSAN , et al., "Concatamerization of adeno-associated virus circular genomes occurs tghroug intermolecular recombination", <u>J. of Virology</u> , 73 (11), (Nov. 1999),pp. 9468-9477	
		ZABNER, J , et al., "Adenovirus-Mediated Gene Transfer to Ciliated Airway Epithelia Requires Prolonged Incubation Time", <u>Journal of Virology</u> , 70 (10), (1996),pp. 6994-7003	
		ZABNER, J , et al., "Adenovirus-mediated generation of cAMP-stimulated Cl- transport in cystic fibrosis airway epithelia in vitro: effect of promoter and administration method", <u>Gene Therapy</u> , 3, (1996),pp. 458-465	

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